

June 6, 1997

Mr. Robert G. Card
[]
Kaiser-Hill Company, L.L.C.
Rocky Flats Environmental Technology Site
P.O. Box 464
Golden, CO 80402-0464

EA 97-03

Subject: Preliminary Notice of Violation (NTS-RFO--KHLL-ENVOPS-1996-0001)

Dear Mr. Card:

This letter refers to the Department of Energy's (DOE) evaluation of noncompliances associated with an increasing trend in the number of criticality safety infractions and an unauthorized movement of six drums in a criticality infracted room of [building]. These issues were identified by your staff through self-assessment and timely awareness of management to the unauthorized movement. This letter also refers to an incident involving an unplanned dispersal of radioactive material during remediation of trenches [].

Noncompliance Tracking System (NTS) reports filed by you concerning the criticality infractions and the drum movement¹ identified several noncompliances with 10 CFR 830.120, "Quality Assurance," pertaining to areas of noncompliance with established contractor programs, procedures and postings; inadequate corrective actions; and insufficient training. Since the NTS reports were filed and during the investigation conducted on February 25-26, 1997, by DOE's Office of Enforcement and Investigation, you provided information on the results of comprehensive root cause evaluations, short term corrective actions taken, and corrective action plans for resolving the underlying causes of these cases. Your proactive approach to identifying and resolving noncompliances associated with the criticality safety infractions meets the discretionary criteria of DOE's Enforcement Policy, and it is concluded that no further enforcement considerations on these matters are necessary.

On October 9, 1996, you also reported to DOE an incident (NTS-RFO--KHLL-ENVOPS-1996-0001) that involved the release of radioactive material during compaction of a radioactively contaminated drum carcass in support of the remediation

¹ NTS-RFO--KHLL-SITEWIDE-1996-0004 and NTS-RFO--KHLL-SOLIDWST-1996-0002.

of trenches [] located [at] the Rocky Flats site. The actual work was performed by Rocky Mountain Remediation Services, L.L.C. (RMRS), a subcontractor, at the direction of Kaiser-Hill Company, L.L.C. (KHLL). Compaction was performed with a track hoe's bucket and resulted in a release to the ground of approximately 1-2 pounds of [radioactive material]. This release was not discovered until several hours later when the track hoe was surveyed upon exiting the exclusion zone. At that time, the spill area was soon identified, the [] area's radiological controls were then upgraded, the contaminated ground was covered with tarps to prevent any further dispersion of [radioactive material], and the site's Emergency Operation Center was activated to ensure that appropriate personnel and equipment were readily available if needed. A subsequent dose determination using air dispersion modeling and conservative assumptions estimated that onsite and offsite doses were minor.

This release occurred due to the failure by both KHLL and RMRS to recognize the applicability of the radiological control requirements of 10 CFR 835, "Occupational Radiation Protection," when radioactive contamination was identified during characterization of [the] trenches [] and the subsequent excavation of soil and debris. In response to this incident you undertook a causal factor analysis and corrective action plan to understand and prevent recurrence of this event. The DOE believes the identification of the noncompliances and the underlying problem of failing to recognize the applicability of 10 CFR 835 to environmental remediation work were disclosed by the response to and investigation of the incident rather than due to any initiative, such as contractor self-assessment, to identify such weaknesses beforehand. The event and conditions constituted inadequate radiological work and contamination control practices, a violation of applicable nuclear safety requirements.

The actual consequences of this incident were small; nonetheless, the violation represents a series of problems that, if they had not been disclosed by this incident and were left uncorrected, could have led to a more serious concern in a subsequent remediation activity involving greater quantities of [radioactive material]. This issue is sufficiently serious to warrant concern by DOE to ensure that effective actions are taken to preclude a recurrence with potentially more serious consequences. Therefore, in accordance with 10 CFR 820, "Procedural Rules for DOE Nuclear Activities," Appendix A, the violation for the [] trenches remediation work has been given a Severity Level III classification.

Since the [] trenches incident involved breakdowns by KHLL in its role of providing project integration and oversight, as well as management direction on radiological control programs, and by RMRS in its role of planning, performing, and directly managing the remediation work, DOE has decided to issue a Preliminary Notice of Violation (Notice) to KHLL as well as to RMRS. You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. Your response should document any additional specific actions taken to date and planned to prevent recurrence. After reviewing your response to this Notice, DOE will determine whether further action is necessary to

ensure compliance with applicable nuclear safety requirements.

Sincerely,

Peter N. Brush
Principal Deputy Assistant Secretary
Environment, Safety and Health

CERTIFIED MAIL
RECEIPT REQUESTED

Enclosure:
Preliminary Notice of Violation Without Civil Penalty
Investigation Summary Report

**PRELIMINARY NOTICE OF VIOLATION
NTS-RFO--KHLL-ENVOPS-1996-0001**

Kaiser-Hill Company, L.L.C.
Rocky Flats Environmental Technology Site
EA 97-03

During a DOE onsite evaluation conducted on February 25-26, 1997, at the Rocky Flats Environmental Technology Site concerning the environmental remediation of trenches [], noncompliances with DOE nuclear safety requirements were identified. These noncompliances are described below in accordance with 10 CFR 820, Appendix A, "General Statement of Enforcement Policy."

- A. 10 CFR 835, "Occupational Radiation Protection," Sections 401(a)(2) and (3) require that "[m]onitoring of...areas shall be performed to:...
- (2) document radiological conditions in the workplace; [and]
 - (3) detect changes in radiological conditions..."

Contrary to the above, from August 23, 1996, through September 19, 1996, monitoring to document radiological conditions in the workplace and to detect changes in radiological conditions was not performed in that sampling for airborne radioactive material was not conducted during remediation activities for the [] trenches that were known to contain radioactive materials. Furthermore, air monitoring was not performed on September 19, 1996, during drum carcass compaction activities that resulted in a release of radioactive material to the workplace.

- B. 10 CFR 835.404(b) requires that "...[a]ppropriate controls shall be maintained and verified which prevent the inadvertent transfer of removable contamination to locations outside of radiological areas under normal conditions."

Contrary to the above, on September 19, 1996, appropriate controls were not maintained or verified to prevent any inadvertent transfer of removable contamination to locations outside of the [] trench exclusion zone in that, during drum carcass compaction, radioactive material was released from a drum carcass to

the ground where the material remained uncontrolled and exposed to windy conditions for approximately 2 hours.

- C. 10 CFR 835.603(e) requires that "...[for a contamination area] [t]he words 'Caution, Contamination Area' shall be posted where contamination levels exceed values listed in Appendix D of this part, but are less than or equal to 100 times those values."

Contrary to the above, from June 6, 1996, through September 19, 1996, when contamination levels exceeding those values listed in Part 835, Appendix D, were discovered in soil and debris excavated from trenches [], posting contaminated trench areas with "Caution, Contamination Area" was not performed.

- D. 10 CFR 835.1001(b) requires that "...[f]or specific activities where use of physical design features are demonstrated to be impractical, administrative controls and procedural requirements shall be used to maintain radiation exposures As Low As Reasonably Achievable (ALARA)."

Contrary to the above, from June 6, 1996, through September 19, 1996, physical design features were impractical for the [trench] remediation work. However, adequate administrative controls and procedural requirements were not implemented to maintain radiological exposures ALARA in that responses to increased levels of radioactive contamination encountered during excavation activities failed to provide: a reassessment of work controls associated with waste excavation, segregation, and compaction activities; comprehensive air monitoring downwind of the excavation activities; and a reassessment of radiological area posting requirements to determine if existing trench area postings needed to be updated.

Noncompliances A through D collectively constitute a Severity Level III violation.

Pursuant to the provisions of 10 CFR Part 820, Kaiser-Hill Company, L.L.C., is hereby required within 30 days of the date of this Notice to submit a written statement or explanation to the Director, Office of Enforcement and Investigation, Attention: Office of the Docketing Clerk, EH-10, CXXI, U.S. Department of Energy, 19901 Germantown Road, Germantown, MD 20874-1290, with copies to the Manager, DOE, Rocky Flats Field Office, Mr. Keith Klein, Deputy Manager for Technology Management, DOE Rocky Flats Field Office, and to the Cognizant DOE Secretarial Office for the facility that is the subject of this Notice. This reply should be clearly marked as a "Reply to a Preliminary Notice of Violation" and should include for each violation: (1) admission or denial of the alleged violation, (2) the steps that will be taken to address the corrective action issues identified in DOE's Investigation Summary Report for this incident, and (3) the date when full compliance will be achieved and corrective actions completed.

Sincerely,

Peter N. Brush
Principal Deputy Assistant Secretary
Environment, Safety and Health

Dated at Germantown, Maryland,
this_____day of_____ 1997.